

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Helmut MANGOLD *et al.*

Appl. No. unknown

Filed: December 19, 2001

For: PYROGENIC OXIDES DOPED  
WITH POTASSIUM

Art Unit: unknown

Examiner: n/a

Atty. Docket No. 39509-175287

Customer No.



26694

PATENT TRADEMARK OFFICE

#7A  
NEAL

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

Please amend the claims as follows:

1. (Amended) A pyrogenically produced oxides of metals or metalloids which oxides are doped by means of aerosol with potassium, characterized in that the base component is an oxide that is pyrogenically produced by flame oxidation or flame hydrolysis and was doped with potassium from 0.000001 to 20 % by wt. and the doping component is a salt of potassium, the BET surface of the doped oxide is between 1 and 1000 m<sup>2</sup>/g and the distribution of particle size is at least 0.7.

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2. (Amended) The pyrogenically produced oxides of metals or metalloids in accordance with claim 1, further characterized in that the pH of the doped, pyrogenic oxide is more than 5, measured in a 4 % aqueous dispersion.
  3. (Amended) The pyrogenically produced oxides of metals or metalloids in accordance with claim 1, further characterized in the doping amount is in a range of 1 to 20,000 ppm and the absorption of dibutylphthalate does not allow any end point to be recognized.
  4. (Amended) A method of producing potassium-doped pyrogenic oxides comprising sequentially feeding a gaseous mixture, including a pyrogenic oxide precursor, and an aerosol to form an aerosol-gaseous mixture, which is fed into a flame under conditions suitable for producing pyrogenic oxides by flame oxidation or flame hydrolysis from the precursor, to form the potassium-doped pyrogenic oxides, and separating the formed pyrogenic-doped oxides from the reacted aerosol-gaseous mixture, wherein the aerosol is homogeneously mixed before the reaction with the gaseous mixture and is prepared from a potassium salt solution.
  5. (Amended) A composition comprising doped pyrogenic oxides in accordance with claim 1.

Kindly add the following claims:

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6. (NEW) The method of claim 4 wherein the aerosol is produced by atomization by means of an aerosol generator.
  7. (NEW) The method of claim 6 wherein the atomization involves a gas-atomizing (two-fluid) nozzle method.